BLADE HOLDER WITH CUTTING FORCE ADJUSTMENT

INDEPENDENT OF STROKE

CLAIMS

1. Blade holder for cutting machines with a blade head secured at a lowering device and with an advancing device for the circular blade secured at the blade head, whereby the advancing device, for movement of the circular blade between a cutting position and a ready position, has an advancing piston rod with an advancing piston which is pneumatically actuated and guided in a chamber of the blade head housing, and whereby the advancing piston rod is prestressed by a pressure spring into the ready position of the circular blade, characterized in that, for overcoming the force of the pressure spring (23) acting onto the advancing piston rod (14) during the cutting operation, a pressing device loading the pressure spring (23) in the direction of the cutting position of the circular blade (16) that is decoupled from the advancing piston rod (14) is provided.

2. Blade holder according to claim 1, characterized in that the pressing device is a slide (24) engaging the pressure spring (23) arranged between the advancing device (19, 20) and the circular blade (16) and that for actuation of the slide (24) a

pneumatic drive (27) is provided.

3. Blade holder according to claim 2, characterized in that the slide (24) embraces externally the blade head housing (18) and is guided at the exterior side of the blade head housing (18).

4. Blade holder according to claim 2, characterized in that the slide (24) engages with a projection (25) radially extending into the blade head housing (18) at the pressure spring (23) positioned in a recess (21) of the blade head housing (18).

5. Blade holder according to claim 2, characterized in that the slide is embodied as a piston (35) arranged in the blade head housing (18) and loaded by the pneumatic drive (27).

6. Blade holder according to claim 5, characterized in that the pressure spring (23) supported at the inner side of the blade head housing (18) is fastened to the piston (35) and the piston (35) pretensions the advancing piston rod (14) into the ready position of the circular blade (15).

7. Blade holder according to claim 1, characterized in that the advancing piston is a diaphragm (20, 36) seated on the advancing piston rod (14) and resting in the chamber (19) with its circumference in a sealing fashion against the blade head housing (18).

8. Blade holder according to claim 6, characterized in that the diaphragm is embodied as a rolling diaphragm (36).

9. Blade holder according to claim 1, characterized in that between the diaphragm (20) and the circular blade (16) a pressure sensor (30) is arranged for measuring the cutting force acting at the circular blade (16).

10. Blade holder according to claim 9, characterized in that pressure sensor (30) between the diaphragm (20) and the wall of the chamber (19) arranged axially at the pressure side a pressure sensor (30) is arranged for measuring the cutting force at the circular blade (16).

11. Blade holder according to claim 9, characterized in that the pressure sensor (30) is arranged between the diaphragm (20) and the projection (29) of the advancing piston rod (14).

12. Blade holder according to claim 1, characterized in that between the diaphragm (20) and the blade holder (15) a damping member (31) is arranged.

13. Blade holder according to claim 12, characterized in that the damping member (31) is arranged between the diaphragm (20) and the projection (29) of the advancing piston rod (14).

14. Blade holder according to claim 12, characterized in that the damping member (31) is arranged between the pressure sensor (30) and the projection (29) of the advancing piston rod (14).

15. Blade holder according to claim 12, characterized in that the advancing piston rod (14) is divided transversely to its longitudinal axis and that the damping member (31) is positioned between the thus formed rod sections.

16. Blade holder according to claim 12, characterized in that the damping member (31) is a shaped body comprised of elastic material.

17. Blade holder according to claim 12, characterized in that the damping element (31) is a spring.